

Amendments to the Claims

1. (currently amended) A polarimeter comprising:

a sequential arrangement of an LED light source, a first polarizer, a material sample, a $\frac{1}{4}$ wave plate, and a second polarizer substantially aligned along a central axis;

the orientation of the first polarizer to the $\frac{1}{4}$ wave plate being fixed; and

the second polarizer being rotatable about the central axis; and

the second polarizer and the $\frac{1}{4}$ wave plate being mounted in a holder that is moveable along the central axis in order to change a distance between the holder and the first polarizer.

2. (original) The polarimeter of claim 1 wherein the LED light source has an emission maximum at a wavelength from about 510 nm to about 540 nm.

3. (original) The polarimeter of claim 1 wherein the LED light source is comprised of multiple LEDs arranged to provide an even illumination field.

4. (original) The polarimeter of claim 2 wherein the LED light source emits at 528 nm.

5. (original) The polarimeter of claim 1 wherein the first polarizer comprises a polarizing film.

Claim 6 (canceled).

7. (currently amended) The polarimeter of claim 7 1 wherein the second polarizer has indicia for determining the degree of rotation.

8. (original) The polarimeter of claim 5 wherein the polarizing film has an extinction ratio of about 10,000:1 or greater.

9. (original) The polarimeter of claim 8 wherein the LED light source has an emission maximum at a wavelength from about 510 nm to about 540 nm.

10. (original) The polarimeter of claim 9 wherein the LED light source is comprised of multiple LEDs arranged to provide an even illumination field.